

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning at page 6, line 15, as follows.

On the other hand, as compared to the mushroom type engaging element, the aforementioned hook type engaging element is more likely to engage the pile and further, obtain appropriate engagement strength and separation strength. At the time of separation, the engaging elements and piles are never cut out and can bear repeated usage. In addition to the aforementioned Japanese Patent Laid-Open Publication No. 6-133808 and Japanese Patent Laid-Open Publication No. 9-32281, for example, Japanese Patent Application No. ~~2001-6440~~ 2001-64460 filed by these inventors has proposed an integrally molded surface fastener to adopt such advantages of the hook type for the fixing device of the disposable diaper and the like.

Please amend the paragraph beginning at page 15, line 22, as follows.

The pillar portion is preferred to have a horizontal section which intersects with the first direction x and the second direction y of the first and second engaging portions in a same direction. The pillar portion may be formed such that its sectional area decreases gradually from the proximal end to the top end. Because according to the present invention, when the pillar section provides a substantially cross shape or letter L shape, the stiffness in the x direction and y direction which intersect with each other at right angle increases, even if the quantity of used material is reduced, difficulty of being buckled is not inferior to a square section whose side has the dimension as the width of the first and second pillar portions or a pillar portion having a circular section whose diameter is the as the width.

Please amend the paragraph beginning at page 31, line 7, as follows.

According to this embodiment, a ~~dimension W1~~ dimension of the first pillar portion 21a having a rectangular section in such a direction that it intersects the second pillar portion 21b is set up substantially equal throughout the vertical direction. A ~~dimension W2~~ dimension of the second pillar portion 21b in a direction that it intersects the first pillar portion 21a is in such a manner that its bottom end portion rises such that it curves mildly in the molding direction and that dimension decreases gradually from halfway of it as it goes

toward the top end. By adopting the pillar portion 21 having the cross shaped section, stiffness of the molded surface fastener 10 in the molding direction and in a direction intersecting the molding direction can be intensified, so that this surface fastener is molded unlikely to fall down with respect to a pressure generated when the surface fastener 10 is engaged, or when the engagement of the engaging element 2 is released. Because the second pillar portion 21b is increased gradually in the molding direction from its top end to its proximal end, buckling thereof at the proximal end and fall-down of the engaging element 2 can be avoided more when comparing with a case where it is formed with the dimension from the top end up to the proximal end. According to this embodiment, the thickness of the base member 1 is 0.1 mm, the height in the vertical direction of the first pillar portion 21a is 0.40 mm, the ~~dimension-W1~~ dimension of the first pillar portion 21a in the direction intersecting the molding direction is 0.45 mm, the ~~width-W2~~ width dimension of the second pillar portion 21b in the direction intersecting the molding direction is all 0.15 mm, an interval between adjacent engaging elements 2 in the molding direction is 1.2 mm and an interval between adjacent engaging elements 2 perpendicularly to the molding direction is 1.25 mm.

Please amend the paragraph beginning at page 32, line 12, as follows.

According to this embodiment, from the top end of the pillar portion 21, the first engaging portion 22a extends substantially horizontally in a direction perpendicular to the molding direction and the second engaging portion 22b extends in the form of a hook along the molding direction. A pair of the first engaging portions 22a extending substantially horizontally in the direction perpendicular to the molding direction from the pillar portion 21 are constituted of wing-like thin plates having substantially same thickness in the vertical direction while the top surface is of a substantially flat plane as shown in FIGS. 1 and 2. The entire shape of this first engaging portion 22a provides a substantially elliptic shape whose ends in the extending direction are circular as shown in FIG. 1. Further, the ~~width-W3~~ width dimension of the first engaging portion 22a in the molding direction is slightly larger than the width of the first pillar portion 21a in the direction. In the meantime, according to this embodiment, the ~~dimension-W3~~ width dimension is 0.28 mm, the overall length in the extending direction is 0.69 mm and the height from the surface of the base member up to the top surface is 0.5 mm.

Please amend the paragraph beginning at page 34, line 21, as follows.

According to this embodiment, a top central portion 22c of the engaging head 22 is slightly dented with respect to the other top surface 22b. Because the top central portion ~~22e~~ 22c of the engaging head 22 is dented slightly more than the other top surface, when it is intended to detach the pile engaging the engaging element 2, the extended portion becomes easy to bend along a border between the dented portion and the engaging head 22 extended from the first pillar portion 21a due to the dented portion. Consequently, even if the proximal end portion of the engaging head 22 is thick in the vertical direction, the pile is easy to detach from the engaging head 22 and further, a predetermined separation strength can be obtained.

Please amend the paragraph beginning at page 36, line 2, as follows.

As the first one of those functions, as described previously, the top surface ~~22b~~ of the engaging head 22 can be formed into a flat plane thereby eliminating the itchy feeling of the top surface ~~22b~~. The second one is that substantially the stiffness as conventional is secured by such a peculiar shape of the pillar portion 21 with a smaller resin amount than the quantity of resin consumed for the conventional pillar portion.

Please amend the paragraph beginning at page 40, line 4, as follows.

The most important component of the present invention is the rotation drum 100 and more specifically, the structure of a preliminarily molded element molding cavity 101 formed on the circumferential face thereof. The cavity 101 of this embodiment is open in the form of a cross on the circumferential face of the rotation drum 100 as shown in ~~FIG. 9~~ FIG. 7 and a main cavity 101a is formed in a straight line up to a predetermined depth while a second engaging element molding cavity 101b is formed at a position 1/3 the main cavity 101a such that it is branched in the molding direction from the center of a long side of a rectangular section, extended obliquely and curved with its front end directed to the circumferential face of the drum. The section is rectangular on deeper side from the position 1/3 from the opening of the main cavity 101a and the sectional area decreases as it goes deeper and the final end terminates with a circular face. Therefore, the entire shape of the preliminarily molded element molding cavity 101 of this embodiment resembles the shape of a three-pronged lance.

Please amend the paragraph beginning at page 42, line 16, as follows.

In addition to the construction comprising the ultrasonic horn 150a and the upper pressing roll 150b, the with-heat pressing portion 150 of the present invention may comprise a lower supporting member 150c whose top face acts as a carrying face ~~150e~~ 150a' for the preliminarily molded surface fastener 10' and an upper with-heat pressing member 150d having a downward inclined face 150e in the feeding direction of the preliminarily molded surface fastener 10' as shown in FIG. 8B. In this case, a gap G2 which is the narrowest portion between the carrying face ~~150e~~ 150a' of the upper with-heat pressing member 150d and the inclined face 150e is set slightly smaller than a dimension gained by adding the setting dimension in the vertical direction of the engaging head 22 to a sum of the dimensions in the vertical direction of the base member 1 and the pillar portion 21.